

SEQUENCE LISTING

<110> WANG, LI
BABIUK, LORNE A.
POTTER, ANDREW A.
WILLSON, PHILIP

<120> POSTWEANING MULTISYSTEM WASTING SYNDROME VIRUS FROM
PIGS

<130> 9000-0040

<140> 09/209,961

<141> 1998-12-10

<150> 60/069,233

<151> 1997-12-11

<150> 60/069,750

<151> 1997-12-16

<160> 24

<170> PatentIn Ver. 2.0

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<211> 1768

<212> DNA

<213> Porcine Circovirus Type II

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<213> Porcine Circovirus Type I

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<210> 3

<211> 314

<212> PRT

<213> Porcine Circovirus Type II

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 Gly Asn Glu Glu Gly Arg Thr Pro His Leu Gln Gly Phe Ala Asn Phe
 50 55 60
 Val Lys Lys Gln Thr Phe Asn Lys Val Lys Trp Tyr Leu Gly Ala Arg
 65 70 75 80
 Cys His Ile Glu Lys Ala Lys Gly Thr Asp Gln Gln Asn Lys Glu Tyr
 85 90 95
 Cys Ser Lys Glu Gly Asn Leu Leu Ile Glu Cys Gly Ala Pro Arg Ser
 100 105 110
 Gln Gly Gln Arg Ser Asp Leu Ser Thr Ala Val Ser Thr Leu Leu Glu
 115 120 125
 Ser Gly Ile Leu Val Thr Val Ala Glu Gln His Pro Val Thr Phe Val
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 Lys Asn Phe Arg Gly Leu Ala Glu Leu Leu Lys Val Ser Gly Lys Met
 145 150 155 160
 Gln Lys Arg Asp Trp Lys Thr Asn Val His Phe Ile Val Gly Pro Pro
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 Gly Cys Gly Lys Ser Lys Trp Ala Ala Asn Phe Ala Asn Pro Glu Thr
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 Thr Tyr Trp Lys Pro Pro Lys Asn Lys Trp Trp Asp Gly Tyr His Gly
 195 200 205
 Glu Lys Val Val Val Ile Asp Asp Phe Tyr Gly Trp Leu Pro Trp Asp
 210 215 220
 Asp Leu Leu Arg Leu Cys Asp Arg Tyr Pro Leu Thr Val Lys Thr Lys
 225 230 235 240
 Gly Gly Thr Val Pro Phe Leu Ala Arg Ser Ile Leu Ile Thr Ser Asn
 245 250 255
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 Ala Leu Tyr Arg Arg Ile Thr Ser Leu Val Phe Trp Lys Asn Ala Thr
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<213> Porcine Circovirus Type I

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35 40 45

Glu Gly Arg Thr Pro His Leu Gln Gly Phe Ala Asn Phe Ala Lys Lys
50 55 60

Gln Thr Phe Asn Lys Val Lys Trp Tyr Phe Gly Ala Arg Cys His Ile
65 70 75 80

Glu Lys Ala Lys Gly Thr Asp Gln Gln Asn Lys Glu Tyr Cys Ser Lys
85 90 95

Glu Gly His Ile Leu Ile Glu Cys Gly Ala Pro Arg Asn Gln Gly Lys
100 105 110

Arg Ser Asp Leu Ser Thr Ala Val Ser Thr Leu Leu Glu Thr Gly Ser
115 120 125

Leu Val Thr Val Ala Glu Gln Phe Pro Val Thr Tyr Val Arg Asn Phe
130 135 140

Arg Gly Leu Ala Glu Leu Leu Lys Val Ser Gly Lys Met Gln Gln Arg
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Asp Trp Lys Thr Ala Val His Val Ile Val Gly Pro Pro Gly Cys Gly
165 170 175

Lys Ser Gln Trp Ala Arg Asn Phe Ala Glu Pro Arg Asp Thr Tyr Trp
180 185 190

Lys Pro Ser Arg Asn Lys Trp Trp Asp Gly Tyr His Gly Glu Glu Val
195 200 205

Val Val Leu Asp Asp Phe Tyr Gly Trp Leu Pro Trp Asp Asp Leu Leu
210 215 220

Arg Leu Cys Asp Arg Tyr Pro Leu Thr Val Glu Thr Lys Gly Gly Thr
225 230 235 240

Val Pro Phe Leu Ala Arg Ser Ile Leu Ile Thr Ser Asn Gln Ala Pro
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Gln Glu Trp Tyr Ser Ser Thr Ala Val Pro Ala Val Glu Ala Leu Tyr
260 265 270

Arg Arg Ile Thr Thr Leu Gln Phe Trp Lys Thr Ala Gly Glu Gln Ser
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Thr Glu Val Pro Glu Gly Arg Phe Glu Ala Val Asp Pro Pro Cys Ala
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Leu Phe Pro Tyr Lys Ile Asn Tyr
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<210> 5
<211> 233
<212> PRT
<213> Porcine Circovirus Type II

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Arg His Arg Tyr Arg Trp Arg Arg Lys Asn Gly Ile Phe Asn Thr Arg
35 40 45

Leu Ser Arg Thr Phe Gly Tyr Thr Val Lys Arg Thr Thr Val Thr Thr
50 55 60

Pro Ser Trp Ala Val Asp Met Met Arg Phe Lys Ile Asp Asp Phe Val
65 70 75 80

Pro Pro Gly Gly Gly Thr Asn Lys Ile Ser Ile Pro Phe Glu Tyr Tyr
85 90 95

Arg Ile Arg Lys Val Lys Val Glu Phe Trp Pro Cys Ser Pro Ile Thr
100 105 110

Gln Gly Asp Arg Gly Val Gly Ser Thr Ala Val Ile Leu Asp Asp Asn
115 120 125

Phe Val Thr Lys Ala Thr Ala Leu Thr Tyr Asp Pro Tyr Val Asn Tyr
130 135 140

Ser Ser Arg His Thr Ile Pro Gln Pro Phe Ser Tyr His Ser Arg Tyr
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Phe Thr Pro Lys Pro Val Leu Asp Ser Thr Ile Asp Tyr Phe Gln Pro
165 170 175

Al
Cm

Asn Asn Lys Arg Asn Gln Leu Trp Leu Arg Leu Gln Thr Ser Gly Asn
180 185 190

Val Asp His Val Gly Leu Gly Thr Ala Phe Glu Asn Ser Lys Tyr Asp
195 200 205

Gln Asp Tyr Asn Ile Arg Val Thr Met Tyr Val Gln Phe Arg Glu Phe
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Asn Leu Lys Asp Pro Pro Leu Glu Pro
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<210> 6

<211> 233

<212> PRT

<213> Porcine Circovirus Type I

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Ala Phe Arg Asn Arg Tyr Arg Trp Arg Arg Lys Thr Gly Ile Phe Asn
35 40 45

Ser Arg Leu Ser Thr Glu Phe Val Leu Thr Ile Lys Gly Gly Tyr Ser
50 55 60

Gln Pro Ser Trp Asn Val Asn Tyr Leu Lys Phe Asn Ile Gly Gln Phe
65 70 75 80

Leu Pro Pro Ser Gly Gly Thr Asn Pro Leu Pro Leu Pro Phe Gln Tyr
85 90 95

Tyr Arg Ile Arg Lys Ala Lys Tyr Glu Phe Tyr Pro Arg Asp Pro Ile
100 105 110

Thr Ser Asn Gln Arg Gly Val Gly Ser Thr Val Val Ile Leu Asp Ala
115 120 125

Asn Phe Val Thr Pro Ser Thr Asn Leu Ala Tyr Asp Pro Tyr Ile Asn
130 135 140

Tyr Ser Ser Arg His Thr Ile Arg Gln Pro Phe Thr Tyr His Ser Arg
145 150 155 160

Tyr Phe Thr Pro Lys Pro Glu Leu Asp Gln Thr Ile Asp Trp Phe His
165 170 175

Pro Asn Asn Lys Arg Asn Gln Leu Trp Leu His Leu Asn Thr His Thr
180 185 190

Ala
CMT

Asn Val Glu His Thr Gly Leu Gly Tyr Ala Leu Gln Asn Ala Ala Thr
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Ala Gln Asn Tyr Val Val Arg Leu Thr Ile Tyr Val Gln Phe Arg Glu
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Phe Ile Leu Lys Asp Pro Leu Asn Lys
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<212> PRT

<213> Porcine Circovirus Type II

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Gly Cys Cys Phe Ala Thr Val Thr Arg Ile Pro Leu Ser Asn Lys Val
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<210> 8

<211> 115

<212> PRT

<213> Porcine Circovirus Type I

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Thr Phe Lys Ser Ser Ala Ser Pro Arg Lys Phe Leu Thr Tyr Val Thr
20 25 30

Gly Asn Cys Ser Ala Thr Val Thr Lys Asp Pro Val Ser Lys Arg Val
35 40 45

Leu Thr Ala Val Asp Arg Ser Leu Arg Phe Pro Trp Phe Arg Gly Ala
50 55 60

Pro His Ser Ile Ser Met Trp Pro Ser Leu Leu Gln Tyr Ser Leu Phe
65 70 75 80

Cys Trp Ser Val Pro Phe Ala Phe Ser Met Trp Gln Arg Ala Pro Lys
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Tyr His Phe Thr Leu Leu Lys Val Cys Phe Leu Ala Lys Phe Ala Asn
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Pro Trp Arg
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<210> 9

<211> 104

<212> PRT

<213> Porcine Circovirus Type II

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Phe Arg Val Cys Lys Ile Ser Ser Pro Phe Ala Phe Thr Thr Pro Arg
 20 25 30

Trp Pro His Asn Glu Val Tyr Ile Gly Phe Pro Ile Thr Leu Leu His
 35 40 45

Phe Pro Ala His Phe Gln Lys Phe Ser Gln Pro Ala Glu Ile Phe Asp
 50 55 60

Lys Arg Tyr Arg Val Leu Leu Cys Asn Gly His Gln Asn Pro Ala Leu
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Gln Gln Gly Thr His Ser Ser Arg Gln Val Thr Pro Leu Ser Leu Arg
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Ser Arg Ser Ser Thr Phe Asn Lys
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<210> 10

<211> 206

<212> PRT

<213> Porcine Circovirus Type I

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Pro Arg Leu Ser Lys Ile Thr Gly Pro Leu Ala Leu Pro Thr Thr Gly
 20 25 30

Arg Ala His Tyr Asp Val Tyr Ser Cys Leu Pro Ile Thr Leu Leu His
 35 40 45

Leu Pro Ala His Phe Gln Lys Phe Ser Gln Pro Ala Glu Ile Ser His
 50 55 60

Ile Arg Tyr Arg Glu Leu Leu Gly Tyr Ser His Gln Arg Pro Arg Leu
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 Gln Lys Gly Thr His Ser Ser Arg Gln Val Ala Ala Leu Pro Leu Val
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 Gly Thr Lys Ile Pro Leu His Leu Val Lys Ser Leu Leu Leu Ser Lys
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 Ile Arg Lys Pro Leu Glu Val Arg Ser Ser Thr Leu Phe Gln Thr Phe
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 Leu Ser Ala Asn Lys Ile Ile Lys Lys Gly Asp Trp Lys Leu Pro Tyr
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 <211> 1768
 <212> DNA
 <213> Porcine Circovirus Type II

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<210> 13
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Loop primer

<400> 13
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<210> 14
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 <212> DNA
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 <223> Description of Artificial Sequence: 1000(-) primer

<400> 14
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<210> 15
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 <212> DNA
 <213> Artificial Sequence

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 <223> Description of Artificial Sequence: RIF(-) primer

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<210> 16
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<223> Description of Artificial Sequence: 1710(+) primer

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<210> 17
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<223> Description of Artificial Sequence: 850(-) primer

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<210> 18
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<223> Description of Artificial Sequence: 1100(+) primer

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: 1570(-) primer

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<210> 20
<211> 59
<212> PRT
<213> Porcine Circovirus Type II

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Thr Ser Gly Gly Met Val Thr Met Val Lys Lys Trp Leu Leu Leu Met
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Thr Phe Met Ala Gly Cys Arg Gly Met Ile Tyr
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<210> 21
<211> 53
<212> PRT
<213> Porcine Circovirus Type II

<400> 21
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1 5 10 15

Lys Phe Ser Glu Leu Tyr Ile His Gly Tyr Thr Asp Ile Val Val Leu
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Val Val Phe Thr Val Phe Glu Arg Ser Ala Glu Ala Tyr Val Val His
35 40 45

Ile Ser Arg Gly Leu
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<213> Artificial Sequence

<220>
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<213> Artificial Sequence

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<210> 24
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<213> Porcine Circovirus Type II

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WJ
 Cnt